



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

646.3310

Job Sheet 206323



Part No: 646.3310

Job Qty: 20 pcs

Part Name: LH Half - Upper Cutter Assembly



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 1/29/20

Job Tracking No:

Due Date: 3/9/20

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV A IPP REV:A NEW ISSUE 12/11/17 JFS VERIFY BY: JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter / Supplier Lead Time	Sign-off
					Setup Hrs	Run Hrs		
110	HAAS 4 Axis	20 pcs	3/9/20	3/9/20	0.44	26.32	HAAS - 1	HLS / JLM
							HAAS - 2	
							HAAS - 3	
							HAAS - 4	
120	QC 2	20 pcs	3/9/20	3/9/20	0.00	0.00	QC 2 - 1	HLS / JLM
							QC 2 - 12	
							QC 2 - 14	
							QC 2 - 17	
							QC 2 - 19	
							QC 2 - 2	
							QC 2 - 20	
							QC 2 - 22	
							QC 2 - 23	
							QC 2 - 25	
							QC 2 - 32	
							QC 2 - 33	
							QC 2 - 35	
							QC 2 - 39	
							QC 2 - 4	
							QC 2 - 40	
							QC 2 - 44	
							QC 2 - 45	
							QC 2 - 48	
							QC 2 - 49	
							QC 2 - 50	
							QC 2 - 51	
							QC 2 - 52	
							QC 2 - 57	
							QC 2 - 62	
							QC 2 - 63	
							QC 2 - 8	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S274664



Part: 646.3310

Job No: 206323

Serial No/Batch: S274664

Revision: Rev A

Inspector:

Exp Date:

Instructions: Various STC's

Date: 04/30/20

DAS
86
9-89

					QC 2 - 66	
					QC 2 - 64	
					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
					QC 2 - 76	
130	QC 8	20 pcs	3/9/20	0.00 0.00	QC 8 - 12	
					QC 8 - 14	
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	mml 20/05/04
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	
					QC 8 - 67	
					QC 8 - 1 (A)	
					QC 8 - 47	
					QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
					QC 8 - 76	
					QC 8 - 61	
140	Outsource - 4 - Anodize	20 pcs	3/9/20		ATG001-VC	10 H2020-CS-00
150	Packaging 2-1 - Receive - B4B	20 pcs	3/9/20	0.00 0.00	Packaging 2 - 1 - B4B	
					Packaging 2 - 2 - B4B	
					Packaging 2 - 3 - B4B	
					Packaging 2 - 5 - B4B	JE MAY 21 2020
					Packaging 2 - 4 - B4B	
					Packaging 2 - 6 - B4B	
					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	
					Packaging 2 - 19 - B4B	
					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	
					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	

					Packaging 2 - 24 - B4B	
					Packaging 2 - 25 - B4B	
					Packaging 2 - 26 - B4B	
					Packaging 2 - 27 - B4B	
					Packaging 2 - 28 - B4B	
					Packaging 2 - 29 - B4B	
					Packaging 2 - 30 - B4B	
					Packaging 2 - 31 - B4B	
					Packaging 2 - 32 - B4B	
					Packaging 2 - 33 - B4B	
					Packaging 2 - 34 - B4B	
					Packaging 2 - 35 - B4B	
					Packaging 2 - 36 - B4B	
					Packaging 2 - 37 - B4B	
155	QC 6	20 pcs	3/9/20	0.00 0.00	QC 6 - 9	
					QC 6 - 68	
					QC 6 - 61	
					QC 6 - 40	
					QC 6 - 81	
						JUL 07 2020
180	Packaging 3-1 - Stock - B4B	20 pcs ✓	3/9/20	0.00 0.00	Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	
					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	
					Packaging 3 - 27 - B4B	
					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 - B4B	
					Packaging 3 - 36 - B4B	
					Packaging 3 - 37 - B4B	
190	QC 21 - SA	20 pcs	3/9/20	0.00 0.00	QC 21 - SA - 21	
					QC 21 - SA - 70	
					QC 21 - SA - 53	
						JUL 15 2020
						DAS 77 9-89

Part Op **110** - (HAAS CNC Vertical Machine) 1-Machine per folio FB154 Blank 13.375
 Descriptions: **120** - (QC2- Inspect parts off machine FAI/FAIB)
130 - (QC8- Inspect parts - second check)
140 - (Outsource process-Anodize per QSI017 4.1.10.1) Issue P/O to ATG : 46402 1- Black Anodize as per Dwg 646.3300
150 - (Receive & Inspect for Damage & Mat'l Certs)
155 - QC6- All purchased or subcontracted products
180 - (Identify as per dwg & Stock Location: _____) ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***
190 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M7075T6S2.000X7.000	7075-T6S Sheet 2" Thick Plate X 7" Wide (Order In Billets - 13.375")	22.2800 ft (1.114 ea)	110-HAAS 4 Axis	<u>5259264</u>

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-HAAS 4 Axis	M7075T6S2.000X7.000	22	18	0

Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	LH Half	7.296inches $\pm$ 0.005	7.301 7.291		7.292
2	LH Half	3.767inches $\pm$ 0.005	3.772 3.762		3.769
3	LH Half	0.457inches $\pm$ 0.005	0.462 0.452		.458
4	LH Half	0.313inches $\pm$ 0.005	0.318 0.308		.314
5	LH Half	0.710inches $\pm$ 0.005	0.715 0.705		.707
6	LH Half	6.469inches $\pm$ 0.005	6.474 6.464		6.465
7	LH Half	10.116inches $\pm$ 0.005	10.121 10.111		10.112
8	LH Half	10.309inches $\pm$ 0.005	10.314 10.304		10.304
9	LH Half	0.177inches $\pm$ 0.005 - 0.001	0.182 0.176	Diameter	.177
10	LH Half	0.209inches $\pm$ 0.005 - 0.001	0.214 0.208	Diameter	.209
11	LH Half	0.250inches $\pm$ 0.005	0.255 0.245		.254
12	LH Half	1.250inches $\pm$ 0.005	1.255 1.245		1.253
13	LH Half	0.125inches $\pm$ 0.005	0.130 0.120	Radius	.125
14	LH Half	3.513inches $\pm$ 0.005	3.518 3.508		3.512
15	LH Half	8.375inches $\pm$ 0.005	8.380 8.370		8.377
16	LH Half	0.250inches $\pm$ 0.005	0.255 0.245		.250
17	LH Half	8.100Degrees $\pm$ 0.500	8.600 7.600	Angle	8.1
18	LH Half	11.689inches $\pm$ 0.005	11.694 11.684		11.685
19	LH Half	11.250inches $\pm$ 0.005	11.255 11.245		11.246
20	LH Half	0.200inches $\pm$ 0.005	0.205 0.195		.200
21	LH Half	45.000Degrees $\pm$ 0.000	45.000 45.000	Angle	45°

Plex 1/29/20 10:18 AM Dart.lajeunesse.marie

Entered: _____ Date: _____



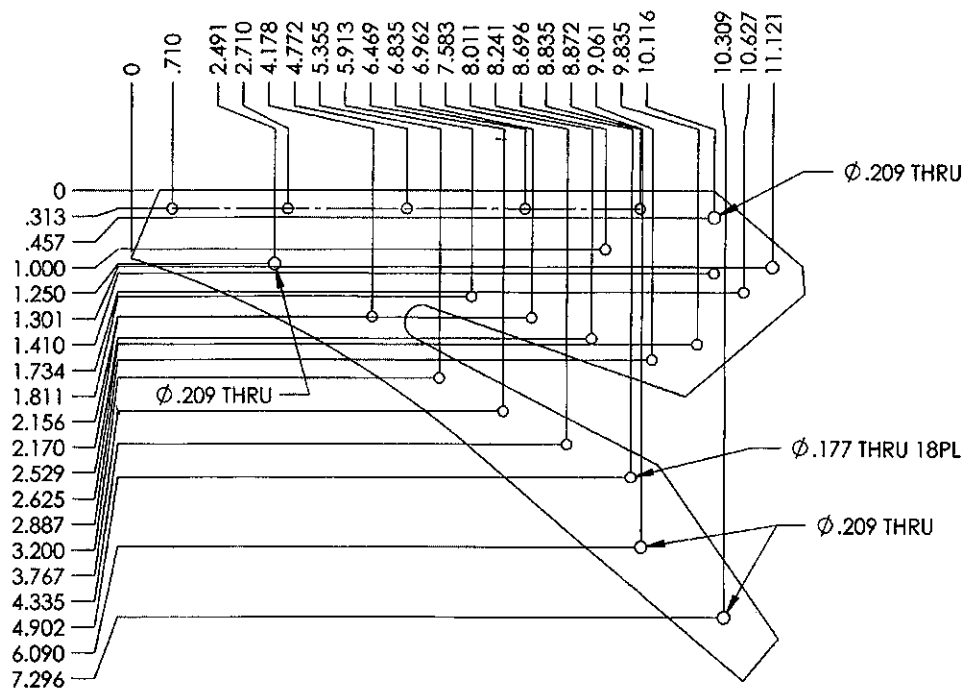
WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

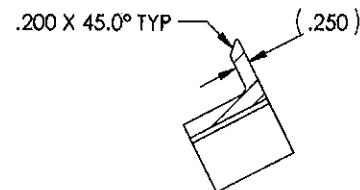
Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



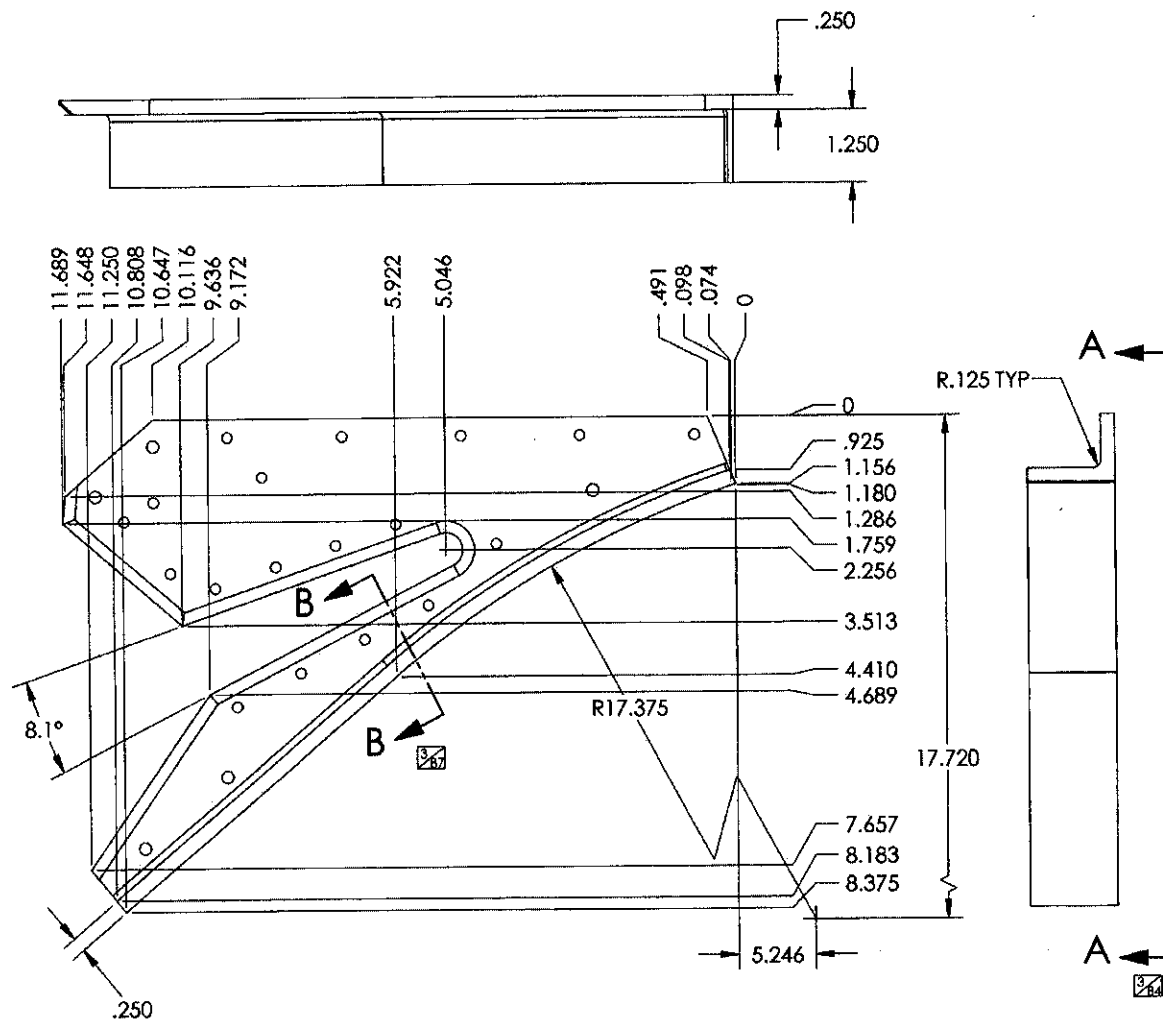
SECTION A-A



SECTION B-B

ORIGINAL DATE 04-01-99 08:24:08		3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY J. HURF	CHECKED P. MAYO	 DART AEROSPACE APICAL INDUSTRIES, INC. (AEROSPACE DIVISION)	
DRAWING APPROVAL			
CUSTODY NO.		UPPER CUTTER ASSY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		REV B	DWG. NO. 646.3300 SCALE NONE SHEET 3 OF 8

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF
APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT
THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



646.3310 SHOWN
646.3311 OPPOSITE

ORIGINAL DATE: 10-24-08		3030 ENTERPRISE CT., SUITE A, VISTA, CA 92081 (760) 724-5300	
DRAWN BY: S. HUFF	CHECKED: P. BRAVO	DART AEROSPACE APICAL INDUSTRIES, INC. 3030 ENTERPRISE CT.	
DRAWING APPROVAL: P. BRAVO			
CONTRACT NO.		UPPER CUTTER ASSY 646.3300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 7 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SIZE: 8 CODE: 07M26 DWG. NO.: 646.3300 SCALE: NONE	REV. A SHEET 2 OF 8



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB046402



Supplier: ATG001-VC
A.T.G. Industries Inc
760 INDUSTRIELLE STREET
ROCKLAND
ON
K4K 1T2 Canada
Phone: 613-446-4544
Fax: 613-446-4556

Attention: Lalande, Marc-Andre

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB046402

PO Date: 5/6/20

Due Date: 5/22/20

**Purchase Order
Revision:**

Revision Date:

Issued By: Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com

Via: Ground

Pymt Terms: Net 60

Freight Terms:

Special Comments:

E-MAILED
2020-05-11

Items

Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	208108	647.0111	647.0100 Rev B	Panel : Various STC's (Outsource process-Anodize per QSI017 4.1.10.1) Issue P/O to ATG: AS PER MPP-172 SECTION 2.1, HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2 AS PER MPP-172 SECTION 4.2, PRIME AS PER IAW MIL-PRF-23377 TYPE 1 CLASS N Certification of Conformity is required	Firmed X10	-	5/22/20	10 pcs	0 pcs	10 pcs	\$40.43/pcs	\$404.30
2	202639	647.7820	647.7800 Rev A	Cross Bracket Aft : Various STC's Outsource process-Anodize per QSI017 4.1.10.1 Issue P/O TO ATG: Anodize & prime as per Dwg. 647.7800	Firmed X16	-	5/22/20	16 pcs	0 pcs	16 pcs	\$12.43/pcs	\$198.88



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER POHB046402



Items

Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
3	207896	647.1715	647.1700 Rev E	Plate : Various STC's (Outsource process-Anodize per QSI017 4.1.10.1) Issue P/O to ATG : Hard Black Anodize and Prime as per Dwg 647.1700 Rev. E	Firmed X12	-	5/22/20	12 pcs	0 pcs	12 pcs	\$31.43/pcs	\$377.16
									MAY 15 2020			
4	205930	647.1710	647.1700 Rev E	Plate : Various STC's (Outsource process-Anodize per QSI017 4.1.10.1) Issue P/O to ATG: AS PER MPP-172 SECTION 2.1, HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2 AS PER MPP-172 SECTION 4.2, PRIME AS PER IAW MIL-PRF-23377 TYPE 1 CLASS N Certification of Conformity is required	Firmed X12	-	5/22/20	12 pcs	0 pcs	12 pcs	\$31.43/pcs	\$377.16
									MAY 15 2020			
5	20876	649.5112	649.5100 Rev D	RH Wiper Deflector : Various STC's Issue P/O to ATG AS PER DWG 649.5100 1- Black Anodize 2- PRIME, SEE NOTE #2 Certification of Conformity is required	Firmed X8	-	5/22/20	8 pcs	0 pcs	8 pcs	\$17.48/pcs	\$139.84

Plex 5/11/20 3:31 PM Dart.Guerin.Kimberley



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER POHB046402



Items

Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
6	208887	D4970-5	D4970 Rev C	Doubler : Certificate of Conformity Only Issue P/O to ATG : FINISH: HARD BLACK ANODIZE AS PER IAW MIL- A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL- P-23377J TYPE 1 CLASS N	Firmed X8.	-	5/22/20	8 pcs	0 pcs	8 pcs	\$7.93/pcs	\$63.44
									MAY 21 2020			
8	208319	D4838-2	D4838 Rev A	Upper Cutter Body, RH : Certificate of Conformity only Issue P/O: ATG, black anodize and prime as per dwg D4838-2 Rev. A	Firmed X12	-	5/22/20	12 pcs	0 pcs	12 pcs	\$11.43/pcs	\$137.16
									MAY 15 2020			
9	207948	RBEL135M- 2905-101- 01	RBEL135M-2905-101 Rev 9	Case Outsource process- Anodize per QSI017 4.1.10.1 -Issue P/O -ANODIZE COLOR CLEAR, PER IAW MIL-A-8625F TYPE 2 CLASS 1, Water sealant -Certificate of Conformity is required	Firmed X3.	-	5/22/20	3 pcs	0 pcs	3 pcs	\$16.18/pcs	\$48.54
									MAY 11 2020			
10	209039	649.8310	649.8300 Rev N/C	Cutter Body : Various STC's Outsource process- Anodize per QSI017 4.1.10.1 Issue P/O to ATG : 1- Black Anodize as per Dwg 646.9700 2- PRIME AS PER DWG, SEE NOTE #2 Certification of Conformity is required	Firmed X5	-	5/22/20	5 pcs	0 pcs	5 pcs	\$15.68/pcs	\$78.40
									MAY 15 2020			

Plex 5/11/20 3:31 PM Dart.Guerin.Kimberley



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB046402



Items

Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
11	206323	646.3310	646.3300 Rev A	LH Half - Upper Cutter Assembly : Various STC's (Outsource process-Anodize per QSI017 4.1.10.1) Issue P/O to ATG : 1- Black Anodize as per Dwg 646.3300	Firmed <i>KJC</i>		5/22/20	20 pcs <i>MAY 21 2020</i>	0 pcs	20 pcs	\$19.28/pcs	\$385.60

DAS
81
9-89

Grand Total: \$2,210.48

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

K. Guerin

Plex 5/11/20 3:31 PM Dart.Guerin.Kimberley



A.T.G. Industries Inc.
760 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 920158

Date: 20-May-20

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Kimberley Guerin
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		ATG Delivery	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
20 ea	Part: 646.3310 LH Upper Cutter Hard Black Anodize per MIL-A-8625F, Type III, Class2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Batch/Lot# 5265778 Job: 27476 PO: POHB046402	Rev: A	DAS 81 9-89
8 ea	Part: D4970-5 Doubler Hard Black Anodize per MIL-A-8625F, Type III, Class2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Batch/Lot# 5265778 Job: 27471 PO: POHB046402	Rev: C	Expiry Date: 8/21 Line: 11
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: MAY 20 2020 Certified Signature: _____ Receiver Signature: _____ A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Made in Canada.			



A.T.G. Industries Inc.
760 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 920158

Date: 20-May-20

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Kimberley Guerin
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via
		ATG Delivery
Quantity	Description	
	Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.	
Made in Canada.		